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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,454

08/11/2006

Masaaki Michida

P/1909-181

7049

7590

11/18/2009

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EXAMINER

PATHAK, SUDHANSHU C

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

11/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,454	Applicant(s) MICHIDA, MASAOKI	
	Examiner SUDHANSHU C. PATHAK	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-11 are pending in the application.
2. The Preliminary Amendment dated 08/11/2006 has been accepted.

Response to Arguments

3. Applicant's arguments, filed amendment dated 08/10/2009, with respect to the Drawing Objections, have been fully considered and are persuasive. Therefore the Drawing Objections have been withdrawn.
4. Applicant's arguments filed in amendment dated 08/10/2009 have been fully considered but they are not persuasive.

In regards to the specific argument ".....the Examiner glossed over the requirement of sole independent claim 1 of the modulating and demodulating section being provided on an upper portion of a shared unit. This is a physical placement requirement which permits downsizing of the unit while enabling heat dissipation without the necessity of a duct (see present specification at paragraphs [0007], [0009] and [0010]).....", this is incorrect. This specific limitation is clearly disclosed in the Suzuki reference (5,963,873) (See Fig. 2, element 12 & Fig.'s 4-6, element 12) {Interpretation: Fig. 2, element 12 is interpreted as baseband main signal interface circuit} and was disclosed in the Office Action dated 05/11/2009 as is also stated below.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4-5, 8 & 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki (5,963,873).

In regards to Claims 1, 4, 5 & 11, Suzuki discloses a digital radio apparatus (Fig.'s 2, 5) characterized in that two modulation and demodulation units are provided in parallel (Fig. 1, elements 2, 5, 10a-d & Fig. 2, elements 11a-f & Fig. 3 & Column 3, lines 50-67) {Interpretation: The reference discloses a plurality of units in parallel (10a-d) each comprising a modulating (2) and demodulating (5) sections} on an upper portion of a shared unit having a baseband main signal interface circuit (Fig. 2, element 12 & Fig.'s 4-6, element 12 & Column 5, lines 5-67 & Column 6, lines 1-10). Suzuki further discloses said shared unit comprises at least one detachable connector unit (Fig. 2, element 12 & Fig. 6, element 36) {Interpretation: The shared unit comprises switches thus the communications units are detachable}. Suzuki further discloses said shared unit comprises an MUX circuit and the MUX circuit is integrated (Fig. 4, elements 31(a-e), 32(a-e)) {Interpretation: The reference discloses transmission and receiving switches which are interpreted as integrated MUX}.

In regards to Claim 8, Suzuki discloses a digital radio apparatus as described above. Suzuki further discloses said shared unit comprises control means for not only setting a device in said digital radio apparatus but conducting communication of monitoring and control information on an outdoor radio apparatus, the control means

also controlling and monitoring an interface unit of the outdoor radio apparatus (Fig. 6, elements 33-39).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2-3, 6-7, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (5,963,873) in view of Shiraishi et al. (2003/0094685).

In regards to Claims 2-3, 9, Suzuki discloses a digital radio apparatus as described above. However, Suzuki does not disclose a modulation and demodulation unit is formed by a printed board in which inner via holes are used.

Shiraishi discloses a printed circuit board comprising a plurality of electronic components (Paragraph 5) wherein the printed circuit board comprising inner via holes (Paragraphs 34-35, 38-39 & 41-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Shiraishi teaches a printed board in which inner via holes are used and this is implemented in the modulation and demodulation unit so as to provide a high density circuitry and the reduction in size while minimizing the wiring length and thus reducing the signal delay of the modulation and demodulation circuits. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention that the

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modulation and demodulations circuits are integrated circuits thus minimizing the size of the circuitry.

In regards to Claims 6-7, 10, Suzuki in view of Shiraishi discloses a digital radio apparatus as described above. Suzuki further discloses said connector unit is commutable to a communication connection unit (Fig. 6, element 36). Suzuki further discloses a ITU-TG783 and an ITU-RF.750 protocol (Abstract, lines 1-14). However, Suzuki in view of Shiraishi does not disclose said connector unit is commutable to a LAN connection unit. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that there is no criticality in implementing a LAN connection this is a matter of design choice depending on the system deployed. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention that there is no criticality in said digital radio apparatus is an indoor radio apparatus this is a matter of design choice depending on the architecture of the communication system.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUDHANSHU C. PATHAK whose telephone number is (571)272-5509. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on 571-272-3042.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Sudhanshu C Pathak/
Primary Examiner, Art Unit 2611